



Unit 3: Food Safety Basics for the Classroom and Kitchen

Fruits and vegetables are an essential part of every child's diet. However, many children need to be encouraged to eat more of them. Fresh produce is not often associated with food safety but understanding basic food safety practices for handling all foods is critical for keeping the children in your care well. This unit will focus on the four key steps you can take to keep foods safe.

- The first step is clean. This step focuses on washing hands, surfaces that come in contact with food, food preparation equipment, and rinsing fresh produce.
- The next step is separate which refers to prevention of cross contamination by keeping raw and ready to eat foods separate.
- The last two steps are chill and cook. These key steps highlight the prevention of microbial growth and the temperature danger zone by keeping cold foods cold and hot foods hot.

Upon completion of this unit you'll be able to list the four key steps to ensure safe food handling. Describe at least one action to take for each step. And develop a list of best practices for incorporating food safety into your classroom and kitchen.

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Let's begin with the first key step, clean. It might seem like every time you turn around in the classroom or kitchen you are washing your hands. That's because keeping your hands clean is the number one way to stop the spread of foodborne illness. It is an important step that should not be skipped.

[Film] *Hand washing is important in reducing foodborne illness because it can help eliminate some cross contamination from germs or bacteria or pathogens that could be on your hand that could possibly get onto the food that we eat.*

In the kitchen you should wash your hands before handling or preparing food, when you change tasks such as opening a can with an opener, and then washing lettuce, after handling raw or under cooked foods such as meats, fish, poultry, or eggs, and before handling ready to eat foods such as fresh produce, a sandwich, or salads.

In the classroom you should wash your hands when you come in from the outdoors, after helping a child blow their nose or cover their mouth, after taking a child to the restroom or using the restroom yourself, after touching your face or hair, or after cleaning up spills or using chemicals.



[Film] *Well, the recommended steps for proper hand washing start with running water, put your hands under running water, apply soap, scrub your hands. We usually say to about the amount of time that it takes to say the ABCs.*

A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y—W, X, Y and Z.

Then that's usually about 20 seconds or so, wash your hands underneath the faucet, grab a single use paper towel, dry your hands, and then throw it into the trash.

Your hands are not the only things that need to be kept clean in your center's classroom and kitchen. To reduce the incidence of foodborne illnesses it is also important to clean and sanitize any place used to prepare and serve food including surfaces and equipment such as counters, microwave plates, desks, and tables. Kitchen equipment, utensils, and food containers should always be cleaned thoroughly with hot soapy water and rinsed before being sanitized. The sanitizer solution will not be effective on dirty surfaces. Depending on the solution used the counter may need to be air dried. Make a safe sanitizing solution for surfaces where food is prepared and served by mixing $\frac{3}{4}$ teaspoon of bleach with 32 ounces of water. This solution should be stored in a labeled container.

To learn more about sanitizing, hand washing, and for posters to hang up at your center refer to the Resources section of this training. Click on the Sharing Board icon and take a few minutes to explore the food safety basics for the classroom and kitchen sharing board questions. Once you have posted a response to a question or responded to someone else's post you will be able to continue the training.

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All fresh produce should be washed before it is prepared and served. Follow these recommended steps for washing fresh produce.

- Remove and discard the outer leaves.
- Wash under running tap water.
- Do not use pooled water.
- Rub the leaves and stalks under running water to remove any dirt that may be hidden.
- Use a vegetable brush for hard skinned produce such as melons or potatoes and gently rub the surface. This brush must be washed and cleaned between usage.



- Wash the outside of produce even though the skins will be removed before eating such as bananas and kiwis.
- Wash any item that will be peeled such as carrots and potatoes before peeling.
- After washing fresh produce remember to wash your hands and any equipment or surfaces which came in contact with the raw produce before moving on to the next task.

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The next food safety step is separate to prevent cross contamination. Cross contamination is the transfer of harmful substances or disease causing microorganisms onto the food. This can occur by unclean hands, food contact surfaces, sponges, cloth towels, and utensils. In the classroom it can occur when a counter is being used for an art project is not properly cleaned and raw produce such as apples are placed on it before being served. Any dirt, chemicals, or even microorganisms left on the counter will be transferred onto the apples. In the kitchen cross contamination can occur when utensils, cutting boards, or even hands are not cleaned in between tasks.

Designating separate cutting boards for produce and raw meats is a common practice in the kitchen. Ready-to-eat foods and raw produce should be stored on the top shelf in the refrigerator or in the specifically designed produce bin. This will minimize exposure to juices from raw meats, fish, and poultry and prevent cross contamination. The best way to control cross contamination is by keeping all equipment and surfaces that come in contact with raw and ready-to-eat foods clean and sanitized. Ready-to-eat foods are edible without further washing or cooking. These include breads, deli meats, sandwiches, salads, and fresh produce served raw.

It is recommended that gloves or single use utensils be used when serving to reduce cross contamination from hands. When wearing gloves it is important to wash your hands before putting them on and after taking them off. Wearing gloves should not be used or thought of as a replacement for good hand washing hygiene. Gloves should always be changed between tasks. For example, if you handle raw meat remove your gloves, wash your hands, and then put on a new pair before moving on to a new task.

To learn more about preventing cross contamination refer to the Resources section of this training. Now that you have learned about preventing cross contamination take a few minutes and update your Best Practices planning tool. Click on the Best Practices icon now to continue the unit.

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Keeping cold foods cold and out of the temperature danger zone is the third important step in preventing microbial growth. The temperature danger zone can vary by state. It is recommended that you check with your state or local health department to determine what is required at your center. In this training we refer to the range of 41 to 135° Fahrenheit as defined by the FDA's 2009 Food Code. The temperature danger zone is the range at which bacteria multiply most quickly. A single bacteria that divides in half every 20 to 30 minutes can grow to over several million in just a few hours. So the longer a food is in the danger zone the longer the bacteria have to multiply. Every refrigerator in your center should have a thermometer placed on the middle shelf and facing out so it is easy to read. The refrigerator's temperature should be maintained at 41° Fahrenheit or below. It is important to keep accurate food thermometers in your refrigerator and freezer. Your center should have a system in place to check these temperatures regularly. Many early childcare centers serve meals family style. Foods from these meals should not be kept at room temperature for more than two hours.

[Film] *'Cause you need your burger, right?*

This time starts from the moment the food is finished cooking or removed from the refrigerator for service. During the summer when the weather is warmer the time is reduced to one hour. When cooking large amounts of food to serve later divide it between several shallow pans to help it cool down quickly. Then put the pans in the refrigerator right away with enough space around them for the air to circulate aiding the cooling process. When food has cooled down be sure to cover. Food should not be left on the counter to cool down. This is a common misconception. In recent survey conducted by the University of Massachusetts and the University of New Hampshire over one hundred childcare educators and food service staff approximately 43% of the educators and 42% of the food service staff indicated that food should be allowed to cool down to room temperature before being refrigerated. Remember, bacteria multiply very quickly at room temperatures. So keep your food out of the danger zone.

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When keeping foods cold to prevent microbial growth it is important to think about the freezer. Freezers should be maintained at 0° Fahrenheit or below. When storing food in the freezer label and date the items so it is easy to identify how long they have been in there. Freezing food does not kill or eliminate bacteria. Pathogens remain in the food and will become active as soon as the food thaws. This is why it is not recommended to thaw frozen foods on the counter at room temperature. Here are some recommended procedures for thawing frozen foods.



- In the refrigerator be sure to place the food on a plate or in a container so thawed liquids will not drip onto surfaces or other foods.
- In an airtight plastic bag placed under running water. Cook food immediately after it is thawed.
- In the microwave according to manufactures' instructions. Also cook immediately after it is thawed.
- Thaw foods while cooking. Most foods can be cooked while frozen but the cooking time will be increased by as much as 50%.

Whether you are handling leftovers or thawing frozen food remember to keep foods out of the temperature danger zone.

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Frequently children bring in lunch or snack from home. Bagged lunches are often overlooked when it comes to temperature control. Lunches with perishable foods must be kept cold and handled carefully. Remind parents about food safety risks and to pack their child's lunches in an insulated bag with a frozen gel pack placed near the perishable food when refrigeration is not available. Provide them with a listing of recommended foods to pack and ideas for keeping foods cold. Examples of popular items packed in bagged lunches that need be kept cold are, peeled or cut fruits and vegetables, salads such as macaroni or potato, deli meats, any type of meat, poultry, or seafood including tuna, eggs and milk products. Keeping cold foods cold 41° Fahrenheit or lower will help slow down bacterial growth and help reduce the risk of foodborne illness.

To learn more about food safety information for parents refer to the Resources section of this training. Now that you have learned about keeping cold foods cold and the temperature danger zone take a few minutes to update your Best Practices planning tool. Click on the Best Practices icon now to continue the unit.

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The fourth key food safety step is about cooking foods to the recommended internal temperature to prevent microbial growth. Hot foods also need to be kept out of the temperature danger zone. Once a food has reached its recommended cooking temperature the food must be kept there or above 135° Fahrenheit when held for service. The only way to be sure a food has reached its recommended internal temperature is by checking its temperature with a food thermometer. Looking at, touching, or smelling the food won't tell you if it has been safely cooked and is free



of pathogens. Pathogens are those tiny microorganisms we learned about earlier. Even when foods are cooked to the recommended internal temperature there is no guarantee that all the pathogens have been eliminated. The best practice is to heat foods and leftovers to the recommended temperature. Hold hot foods above 135° Fahrenheit and serve immediately. For example, if you are making vegetable soup heat the soup to 165° Fahrenheit and keep the soup at a temperature above 135° Fahrenheit until ready to serve.

To learn more about cooking time and temperatures and tips on how to use and calibrate a food thermometer refer to the Resources section of this unit. Now that you have learned about hot foods hot and the temperature danger zone take a few minutes to update your Best Practices planning tool. Click on the Best Practices icon now to continue the unit.

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Remember to follow these four key steps to good food safety.

- Clean your hands, surfaces, food preparation equipment and rinse all fresh produce.
- Prevent cross contamination by cleaning and sanitizing surfaces, equipment and utensils, and keeping raw produce and ready to eat foods separate from raw meats, fish, and poultry.
- Chill foods promptly. Keep cold food cold and refrigerators at 41° Fahrenheit or lower.
- Cook foods to the recommended internal temperature and keep foods out of the temperature danger zone to prevent bacteria from multiplying.

By following these recommended steps you can reduce the risk of foodborne illness.

Congratulations, you have finished Food Safety Basics for the Classroom and Kitchen. What steps can you take over the next year to meet your best practice goals? Click the Best Practices icon and add your future goals to the Best Practices planning tool. If you have completed Units 1 and 2 when your planning tool is submitted you will be instructed to complete a posttest survey. Your personalized certificate of completion can be printed when the survey is submitted. We then invite you to continue the training with Unit 4, Food Safety and Garden Activities. And Unit 5, Food Safety on Field Trips to Farms and Farmers' Markets. Click on the Best Practices icon now to continue.